ORTHOSPORTS NEWS

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Welcome to our Autumn edition of Orthosports News

Dr Doron Sher presents an interesting article on Patellofemoral Joint Replacement and Dr Andreas Loefler discusses Pudendal Nerve Entrapment (PNE). In our Key Examination Points Section Dr Mel Cusi takes a look at Low Back Examination.

Our RACGP Accredited GP Education modules continue to be well received. Upcoming dates are listed on the back page.

We hope you enjoy this issue – *The Team at Orthosports*

AOA
AUSTRALIAN ORTHOPAEDIC ASSOCIATION

WHO ARE WE?

Orthosports is a professional association of Orthopaedic Surgeons based in Sydney.

ORTHOSPORTS LOCATIONS

- Concord 02 9744 2666
- Hurstville 02 9580 6066
- Penrith 02 4721 7799
- Randwick 02 9399 5333

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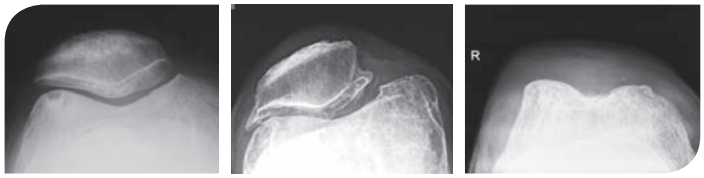
www.orthosports.com.au

Patellofemoral **Joint Replacement**

Isolated patellofemoral arthritis affects nearly 10% of the population over 40 years of age and is more common in females than males. The symptoms are generally well controlled with NSAIDS, physiotherapy, taping and injections.



From left: Normal Patella, Patellofemoral arthritis and Patellectomy.

It is essential that the patient loses weight, stretches out their hamstrings and modifies their activities to avoid lunges and squats. It is also ideal for them to avoid stairs where possible. Surgical intervention is only indicated when these treatments fail. The surgical options include arthroscopic debridement, tibial tubercle unloading procedures and partial or complete patellectomy. The very last resort is partial (patello-femoral) or Total Knee Replacement.

Unfortunately surgical treatment without a joint replacement has a success rate of only 60% to 70%. TKR does relieve the pain of patellofemoral arthritis but is not an ideal option in younger patients because they tend to lose flexion and have lower activity scores. Due to these limitations patellofemoral replacement is emerging as a more mainstream option despite its relatively high complication rate.

INDICATIONS FOR PATELLOFEMORAL REPLACEMENT

The ideal candidate for patellofemoral replacement has isolated, non-inflammatory anterior compartment arthritis which results in pain and functional limitations. Patients should have only retropatellar pain that is exacerbated by stairs, sitting with the knee flexed and standing from a seated position. Symptoms should be reproducible during physical examination and with squatting and patellar inhibition testing. Maltracking or instability of the patella are relative contra-indications to the surgery.

Xrays should show isolated patellofemoral arthritis with no tibiofemoral involvement. This should be confirmed on MRI and arthroscopy.

TKR FOR ISOLATED PATELLOFEMORAL ARTHRITIS

Several studies have reported successful results of TKR for isolated anterior compartment arthritis, with good midterm results in up to 90% of patients.

PATELLOFEMORAL REPLACEMENT

Patellofemoral replacement was first developed over 30 years ago and the initial failure rates were quite high. The current design of onlay prostheses seems to work better than the older design of inlay prosthesis. Even so, the revision rate at 5 years can be as high as 10%. The usual mode of failure is progressive tibiofemoral arthritis. As long as the patella component does not need to be revised the results of conversion to a TKR can be quite good.

CONCLUSION

The high failure rates and patellar tracking complications seen in early inlay Patellofemoral replacement designs have now been minimized with the modern generation of onlay-style prostheses. Patellofemoral replacement outcomes can be optimized with proper patient selection, meticulous surgical technique, and selection of an onlay-style implant. This is a challenging clinical problem but there is no doubt that the results of this operation are improving with time.

Dr Doron Sher

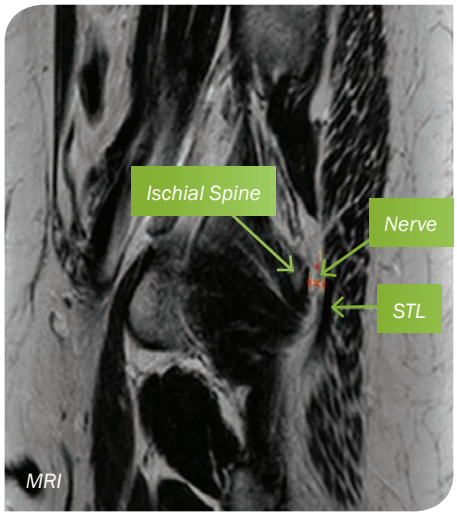
Pudendal Nerve Entrapment (PNE)

PNE is an uncommon syndrome, but may be a source of chronic pelvic pain. Symptoms include genital numbness, pain, hyperaesthesia, urinary, bowel, and sexual dysfunction. Pain is often positional, worse with sitting, relieved by standing, and absent when lying down. The typical symptoms are seen in competitive cyclists. Males develop recurrent numbness of the penis and scrotum, especially when cycling for longer distances.

There are numerous causes of PNE. These include inflammatory and autoimmune conditions, recurrent infections, pregnancy, accidents, previous surgery, physical training and sports. The pudendal nerve can be trapped between the sacro-tuberous and sacro-spinous ligaments, similar to carpal tunnel syndrome.

As PNE is rare, the diagnosis is often delayed. Patients are referred to urologists, gynaecologists, and not infrequently to psychiatrists.

There are no specific clinical signs for the syndrome. Digital palpation of the ischial spine may produce pain and a pudendal nerve block may relieve symptoms temporarily. A pelvic MRI may show anomalous sacro-tuberous and or sacro-spinous ligaments or direct compression of the pudendal nerve.



Treatment of PNE is challenging. Various ergonomic devices can help, such as doughnut shaped pillows or changing the height of desks and chairs. Some patients prefer to work at a standing altogether. Varying the height and angle of bicycle seats or changing to another type of saddle may also help. Physical therapy is mainly aimed at pelvic floor exercises, stretches and at a modification of sports and training regimes. Medications include antidepressants, anti-epileptics, and nerve specific medications. Injections are mainly diagnostic with long acting local anaesthetics and occasional use of steroids. Radiofrequency has been used in some cases.

Surgical decompression is a last resort. The trans-gluteal approach involves division of the sacro-tuberous ligament and any aberrant deep fibres and septa, which may compress the pudendal nerve. The nerve can be inspected and followed in its course, as it passes through the greater sciatic foramen, over the spine of the ischium and then forward into Alcock's canal. The nerve may also have aberrant branches, which can traverse the ligaments. Once the nerve has been identified and mobilised the deep sacro-spinous ligament is divided, allowing medial and anterior transposition and relaxation of the nerve.

The operation takes about an hour per side. Two thirds of patients have bilateral symptoms. The gender ratio is about 4 to 1, with females much more commonly affected. Patients are hospitalised for one or two nights. In the first week after surgery, sitting is possible, but uncomfortable. Once pain permits patients are encouraged to start stretching their hamstrings to encourage gliding of the pudendal nerve and reduce deep scarring.

As many patients present with chronic pain, results are judged with caution. It may take six months for the symptoms to resolve. Approximately one third are expected to make a good recovery, one third will make a partial recovery and one third of patients may not improve.

There are very few centres in the world for the treatment of PNE. Patients should be referred to a pelvic pain specialist. Should surgery be required, it can now be performed in Sydney. Dr Loefler, who does hip surgery, spine surgery and pelvic trauma, has done more than 80 decompressions pudendal nerve.

PNE is a rare, but debilitating condition. It should to be considered in patients with persistent pelvic pain and numbness. A greater awareness of PNE will enable a timely diagnosis and treatment of these patients.

Dr Andreas Loefler

KEY EXAMINATION POINTS

The low back examination

The assessment of patients with low back pain has been a diagnostic challenge for many years. Only 15% of patients can be offered a definite pathological diagnosis, and there are not enough procedures to be specific in the differential diagnostic maze.

We can however reassure the patient by excluding serious spinal pathology, predicting likely progress and offering a rational approach to management[1].

Given the variety of causes of back pain and that they often present in combination, the concept of diagnostic triage is worth considering.

DIAGNOSTIC TRIAGE

Back pain can be the result of a multitude of causes, both of a mechanical or a biological nature. Most of them are rare, and a *differential diagnosis list* is not practical in the clinic. A diagnostic triage approach is a more effective way, both for the clinical management of the condition and the reassurance of the patient. A simple -but not simplistic- diagnostic triage follows:

- Simple backache
- Nerve root pain
- Potentially serious spinal pathology

It has been mentioned earlier that the term "simple backache" is not specific enough as a diagnosis. Common presentations of patients with low back pain in the authors' experience will be described, as they can be of assistance in history taking.

INSPECTION

Greet in waiting room, observe posture (? standing, seated, and how arises). Observe gait as the patient walks into consultation room: look for antalgic gait, decreased stance phase on one side or lateral compensation.

Once seated, does the patient remain seated comfortably, fidget / shift weight from right to left. What postures does the patient adopt? Erect, slumped anteriorly, slumped posteriorly (perched on the edge of the chair).

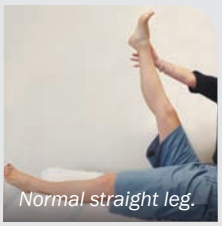
STANDING

Good range of flexion (patient touching toes).

Range of motion

It is difficult to measure range of motion in a meaningful way. It is important to look at the whole back and look for stiff segments in the general movement, as they can point to a local cause of pain (facet joint strain, muscle spasm, etc). Forward flexion can be assessed by measuring the distance from fingers to floor. Normal extension range would allow fingers to reach the posterior aspect of mid thigh. Lateral flexion should see fingers reaching the level of the knee. Rotation takes place mainly at the level of the thoracic spine.

The stork (Gillett) test examines load transfer through the pelvis, especially the sacro-iliac joint. Place one thumb on PSIS (posterior superior iliac spine) and the other over the spinous process of S2. Ask the patient to flex the opposite hip (raise the knee) to 90°. Both thumbs should remain at the same level. If the thumb over S2 moves inferiorly, the test is positive.



Normal straight leg.

Special tests

The straight leg raise test is done by the examiner lifting the heel with a straight knee. It increases neural tension. A normal test would allow nearly 90° of flexion. This can be reduced by hamstring tension or by neural tension (disc herniation). Pain should travel all the way to the foot. Pain in the posterior thigh is usually due to hamstring tightness. A malingerer will have a positive test very early (usually in the first 30°) and at the same time press on to the examination couch with the opposite heel.

SUPINE

Active straight leg raise test. This also tests the integrity of the load transfer through the pelvis. Ask the supine patient to raise one leg about 30° for five seconds, and repeat the other side. If there is pain, inability to raise one leg, rotation of the trunk towards the same side or the patient feels that one leg is 'heavier' than the other, the test is positive, and compensation strategies are at work. These can involve psoas, gluteals, hamstrings and adductors, and produce pain in these areas.

PRONE

Palpate in sequence the spinous process of all the vertebrae, and the spaces between them (supraspinous ligament).

The posterior superior iliac spine is deep to the dimples of Venus, and inferior to it lies the long dorsal sacro-iliac ligament. It can be confused with the lateral border of the sacrum. Tenderness of the ligament on palpation in association with a positive stork and active straight leg raise test indicates poor mechanical stability of the pelvis to transfer load.

Further information on Neurological Screening is available on our website: www.orthosports.com.au/content_common/pg-low-back-pain-exam.seo

Dr Mel Cusi

TABLE 1: DIFFERENTIAL DIAGNOSIS OF LOW BACK PAIN

Causes of Low Back Pain	Other Causes of Low Back Pain	Not to be missed
Injuries	Spondylolisthesis	Malignancy
Intervertebral disc	Spinal canal stenosis	Primary
Apophyseal joints	Insufficiency fractures	Metastatic
Pars interarticularis stress fracture	Osteoarthritis of the spine	Osteoid osteoma
S.I.J injury / inflammation	Rheumatological conditions	Multiple myeloma
Paravertebral muscle trigger points	Genito-urinary conditions	Severe osteoporosis
Disc prolapse / hernia	Gastrointestinal conditions	Stress fractures

[1] *Waddell G. The Back Pain Revolution, Churchill Livingstone, 1998, p.9*

Orthopaedic Surgeons and their Interests

LOCATION	SURGEON	SPECIALTY
CONCORD 47-49 Burwood Road Concord NSW 2137 Tel: 02 9744 2666	Dr Todd Gothelf	Foot & Ankle, Shoulder
	Dr George Konidaris	Foot & Ankle, Hip and Knee
	Dr John Negrine	Foot & Ankle (Adult)
	Dr Rodney Pattinson	Paediatrics and General Orthopaedics
	Dr Doron Sher	Knee, Shoulder and Elbow
	Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics
HURSTVILLE Medica Centre 29-31 Dora Street Hurstville NSW 2220 Tel: 02 9580 6066	Dr Jerome Goldberg	Shoulder
	Dr Todd Gothelf	Foot & Ankle, Shoulder
	Dr George Konidaris	Foot & Ankle, Hip and Knee
	Dr Andreas Loefler	Spine, Trauma, Hip and Knee
	Dr John Negrine	Foot & Ankle (Adult)
	Dr Rodney Pattinson	Paediatrics and General Orthopaedics
	Dr Ivan Popoff	Shoulder, Knee and Elbow
	Dr Allen Turnbull	Hip and Knee
	Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics
PENRITH Suite 5B, 119-121 Lethbridge Street, Penrith NSW 2750 Tel: 02 4721 7799	Dr Todd Gothelf	Foot & Ankle, Shoulder
	Dr George Konidaris	Foot & Ankle, Hip and Knee
	Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics
RANDWICK 160 Belmore Road Randwick NSW 2031 Tel: 02 9399 5333	Dr Jerome Goldberg	Shoulder
	Dr Todd Gothelf	Foot & Ankle, Shoulder
	Dr George Konidaris	Foot & Ankle, Hip and Knee
	Dr Andreas Loefler	Spine, Trauma, Hip and Knee
	Dr John Negrine	Foot & Ankle (Adult)
	Dr Rodney Pattinson	Paediatrics and General Orthopaedics
	Dr Ivan Popoff	Shoulder, Knee and Elbow
	Dr Doron Sher	Knee, Shoulder and Elbow

Sport & Exercise Medicine Physicians

PHYSICIAN	LOCATION	PHYSICIAN	LOCATION
Dr Paul Annett	Hurstville	Dr Mel Cusi	Concord | Hurstville | Randwick
Dr John Best	Randwick		

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40 Category 1 CPD points

Hurstville: Thursday, 8th May, 2014
Penrith: Tuesday, 17th June, 2014
Randwick: Tuesday, 19th August, 2014
Concord: Tuesday, 26th August, 2014

Management of Knee Arthritis
40 Category 1 CPD points

Hurstville: Wednesday, 28th May, 2014
Concord: Wednesday, 3rd September, 2014
Randwick: Thursday, 11th September, 2014

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"An excellent meeting. It was among the best I have ever attended."

"I was very impressed by both the online and face to face components and found it very useful in updating my knowledge."

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